

### **REMARKS**

The Office Action dated December 29, 2006 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 18, 26 and 29 have been amended to clearly point out and distinctly claims the invention. No new matter is added and no issues are raised with require further search. Claims 18-35 are pending and are submitted for consideration.

Claims 18, 21, 26-29 and 32-35 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,708,033 to Linkola in view of U.S. Patent No. 5,918,181 to Foster and U.S. Patent Publication No. 2003/0157942 to Osmo. The Office Action took the position that Linkola teaches each and every element recited in claims 18, 21-29, and 32-34, except for wherein responsive to the user equipment not currently being connected in the network, the location of the user equipment is determined in dependence on the stored connection information for the user equipment, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment. Therefore, the Office Action combined the teachings of Linkola with the teachings of Foster and Osmo yield all of the elements of claims 18, 21, 26-29 and 32-35. The rejection is traversed as being based on references that do not teach or suggest each element of claims 18, 21, 26-29 and 32-35.

Independent claim 18, upon which claims 19-28 depend, recites a method in a communication system for providing a location service with geographical location

information associated with a user equipment capable of communicating with the communication system. The method includes storing connection information identifying a connection of the user equipment in the communication system. The method also includes determining whether the user equipment is currently unreachable in the network. If the user equipment currently unreachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment and wherein the connection information includes a service area identity or a cell global identity. The method further includes translating the connection information into geographical coordinates.

Independent claim 29, upon which claims 30-34 depend, recites a communication system including a location server for providing geographical location information associated with a user equipment capable of communicating with the communication system. The communication system also includes a network element for storing connection information identifying a connection of the user equipment in the communication system and for determining whether the user equipment is currently unreachable in the network. Responsive to a request from the location server for location information, if the user equipment is currently unreachable in the network, the network element provides the location server with details of the connection information last stored for the user equipment, the connection information including a service area identity or a cell global identity, and wherein the location server translates the connection information into geographical coordinates.

Claim 35 recites a communication system including providing means for providing geographical location information associated with a user equipment capable of communicating with the communication system. The system also includes storing means for storing connection information identifying a connection of the user equipment in the communication system and for determining whether the user equipment is currently unreachable in the network. Responsive to a request from the providing means for location information, if the user equipment is currently unreachable in the network, the storing means provides the providing means with details of the connection information last stored for the user equipment, the connection information including a service area identity or a cell global identity. The providing means translates the connection information into geographical coordinates.

Applicants submit that the cited combination of references fail to teach or suggest the combination of elements recited in any of the presently pending claims

Linkola teaches a system for changing the service profile of a mobile subscriber including a location part, an evaluation part, and a subscriber connection exchange part. A home location register contains individual subscriber connections, which have a different service profiles. The location part finds out the location of the mobile station in the network and to give location information to the evaluation part, which checks if the location information has changed compared with the location information received earlier. If the information has changed, it searches the memory for the corresponding location information and compares the connection information in the record with the

current connection information. If the connection information is identical, the process remains waiting for new location information. If the connection information is different, the evaluation logic deduces that the connection must be exchanged for a new one and a connection exchange operation must be started.

Foster teaches a method and apparatus for operating and locating a digital cordless telephone (DCT) handset among an integrated network of base stations. The system utilizes a standard communication protocol to establish radio communication links between terminals and a network of base stations, where each base station is directly interfaced to a local exchange and is capable of providing access to the public and/or private telephone network. Each base station is a network node that contains a copy of a common database that may be updated, as needed, to provide current information on the location of individual terminals. The common database contains various information on each base station, each terminal, and the latest location of each terminal at a particular base station. Foster discloses a system in which a mobile handset is located by the system when an incoming call for the handset is received. Therefore, the handset is only located once a connection needs to be set up. The system in Foster first tries to locate the handset from the base station at which the call is received and at the last known base station of the handset. If this is not successful, the system tries to locate the handset from all base stations in the network. If this does not succeed in locating the handset, then the call to the handset cannot be set up. See at least the Abstract, Col. 8, lines 29-48 and Col. 10, lines 15-29 of Foster.

Osmo discloses a method of providing location dependent information in a communications system. The method includes the steps of: providing information identifying the location of a first station; sending said location information to a first element, the first element determining a second element based on the location information; and the second element providing geographic information relating to the location information. See at least the Abstract of Osmo.

Applicants submit that the combination of Linkola, Foster and Osmo fails to teach or suggest each element of the presently pending claims. Each of claims 18, 29 and 35, in part, recites determining whether the user equipment is currently unreachable in the network, wherein if the user equipment is currently unreachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment. As acknowledged in the Office Action, Linkola does not teach or suggest this feature.

Foster does not cure any of the deficiencies of Linkola, as noted above. Specifically, Foster does not teach or suggest determining whether the user equipment is currently unreachable in the network, wherein if the user equipment is currently unreachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment, as recited in claims 18, 29 and 35. As noted above, Foster first attempts to reach the terminal from the base station in which the call is received and from the last known location of the terminal. See at least Col. 8, line 29-31 of Foster. As disclosed in Foster, this first step is

performed without knowing if the terminal is unreachable. If the terminal is not reached after the first step, Foster then proceeds with a system-wide search where each base station simultaneously attempts to reach the terminal. Foster also discloses that if the terminal is not reached and a time period of 8 seconds expires, then the call is diverted to a default extension and the call to the terminal is not set up. See at least Col. 10, line 15-29 of Foster. Thus, there is no teaching or suggestion in Foster of determining the last known location if the user equipment is currently unreachable in the network, as recited in the presently pending claims.

Contrary to the recitation of the pending claims, in Foster, at the step in which the last known location is used, the system has not determined if the terminal is unreachable. Therefore, Applicants submit that Foster does not teach or suggest that if the user equipment is currently unreachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment, as recited in the pending claims.

Osmo also does not cure any of the deficiencies of Linkola and Foster, as noted above. Specifically, Osmo does not teach or suggest determining whether the user equipment is currently unreachable in the network, wherein if the user equipment is currently unreachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment, as recited in claims 18, 29 and 35. Therefore, Applicants respectfully request that the rejection under 35 U.S.C. 103(a) be withdrawn because neither Linkola, Foster nor Osmo, whether taken

singly or combined, teaches or suggest the combination of features recited in claims 18, 29 and 35, and hence dependent claims 21, 26-28 and 32-34 thereon.

Claims 22, 23, 24 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Linkola in view of Foster and Osmo and further in view of Official Notice. The Office Action took the position that Linkola, Foster and Osmo teach each and every element recited in claims 22, 23, 24 and 25, except for storing the connection information in a radio network controller of the communication system or in a mobile switching center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system. However, the Office Action alleged that storing the connection information in a radio network controller of the communication system or in a mobile switching center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system are known in the art. Therefore, according to the Office Action, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Linkola, Foster and Osmo to provide the method as claimed. Applicants traverse the rejection and respectfully submit that the cited combination of references, when taken alone or in combination, fails to teach, show, or suggest each and every limitation recited in claim 18, upon which claims 22, 23, 24 and 25 depend.

Applicants submit that the Office Action has provided no proof that connection information, as recited in claims 22, 23, 24 and 25, is known to those skilled in the art.

Specifically, the Office Action has provided no proof that connection information including a service area identity or a cell global identity, as recited in claim 18, is known to one skilled in the art to be stored in a radio network controller of the communication system or in a mobile switching center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system. Thus, Applicants traverse the allegation made by the Office Action that it is known to those skilled in the art that connection information is to be stored in a radio network controller of the communication system or in a mobile switching center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system, as recited in claims 22, 23, 24 and 25.

Furthermore, as presented above, the cited references of Linkola, Foster and Osmo fails to teach or suggest determining whether the user equipment is currently unreachable in the network, wherein if the user equipment is currently unreachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment, as recited in claim 18, upon which claims 22, 23, 24 and 25 depend. Therefore, Applicants respectfully request that the rejection under 35 U.S.C. 103(a) be withdrawn because neither Linkola, Foster nor Osmo, whether taken singly or combined, teaches or suggest the combination of features recited in claim 18 and hence dependent claims 22, 23, 24 and 25 thereon.



Claims 19, 20, 30 and 31 were rejected under 35 U.S.C. §103(a) as being unpatentable over Linkola in view of Foster and Osmo and further in view of U.S. Patent No. 6,603,976 to Amirijoo. The Office Action took the position that Linkola, Foster and Osmo teach each and every element recited in claims 19, 20, 30, and 31, except for the location service being provided by a gateway mobile location center. However, the Office Action combined the teachings of Linkola, Foster, Osmo and Amirijoo as teaching this feature, and as such, the Office Action concluded that it would have been obvious to one of ordinary skill in the art to have combined the teaching of the references to generate claims 19, 20, 30, and 31. Applicants traverse the rejection and respectfully submit that the cited combination of references, when taken alone or in combination, fails to teach, show, or suggest each and every limitation recited in claims 18 and 29, upon which claims 19, 20, 30, and 31 depend.

Linkola and Foster are discussed above. Amirijoo teaches a wireless communications system capable of delivering Time Of Arrival (TOA) positioning data to at least one externally operated and maintained requesting agent, including a gateway to the external agent, which provides an interface to the requesting agent.

Amirijoo does not cure the deficiencies of Linkola, Foster and Darnel, as outline above. Specifically, Amirijoo does not teach, show, or suggest suggest determining whether the user equipment is currently unreachable in the network, wherein if the user equipment is currently unreachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user

equipment, as recited in claims 18 and 29, upon which claims 19, 20, 30, and 31 depend. Therefore, Applicants respectfully request that the rejection under 35 U.S.C. 103(a) be withdrawn because neither Linkola, Foster, Osmo nor Amirijoo, whether taken singly or combined, teaches or suggest the combination of features recited in claims 18 and 29, and hence dependent claims 19, 20, 30, and 31 thereon.

As noted previously, claims 18-35 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 18-35 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



---

Arlene P. Neal  
Registration No. 43,828

**Customer No. 32294**  
SQUIRE, SANDERS & DEMPSEY LLP  
14<sup>TH</sup> Floor  
8000 Towers Crescent Drive  
Tysons Corner, Virginia 22182-2700  
Telephone: 703-720-7800  
Fax: 703-720-7802

APN:jkkm